

Figure 1a

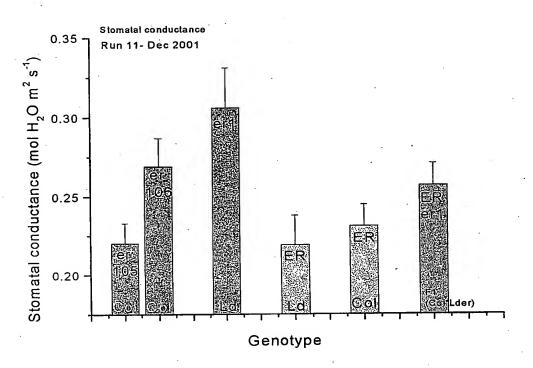


Figure 1b

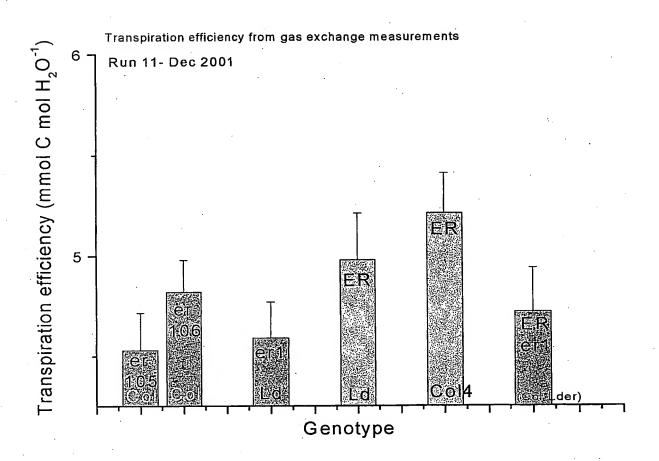


Figure 1c

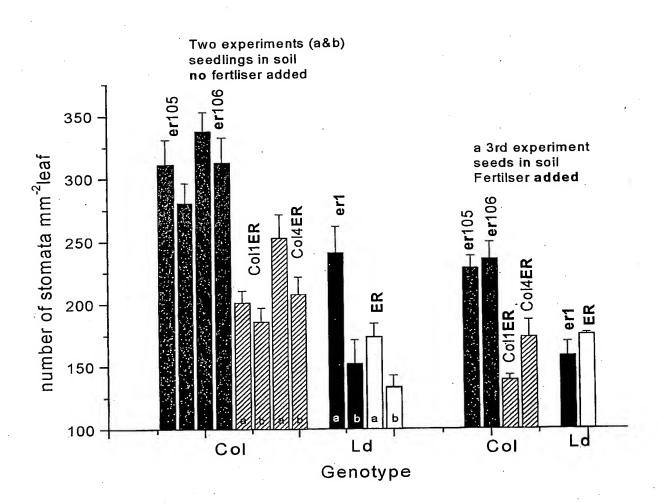


Figure 2a

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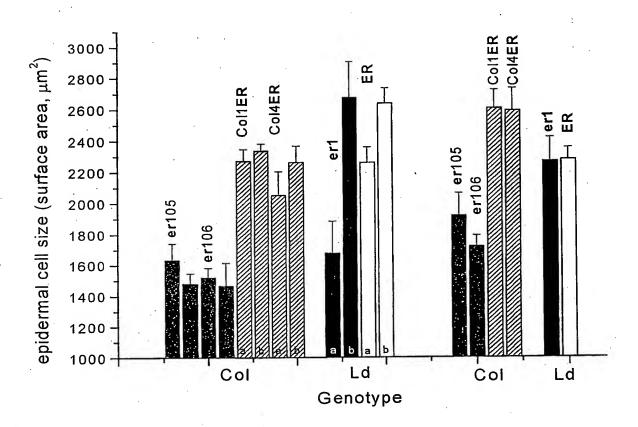


Figure 2b

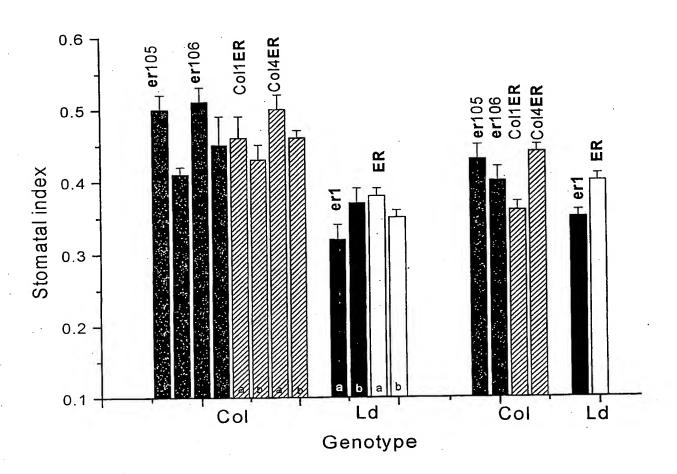


Figure 2c

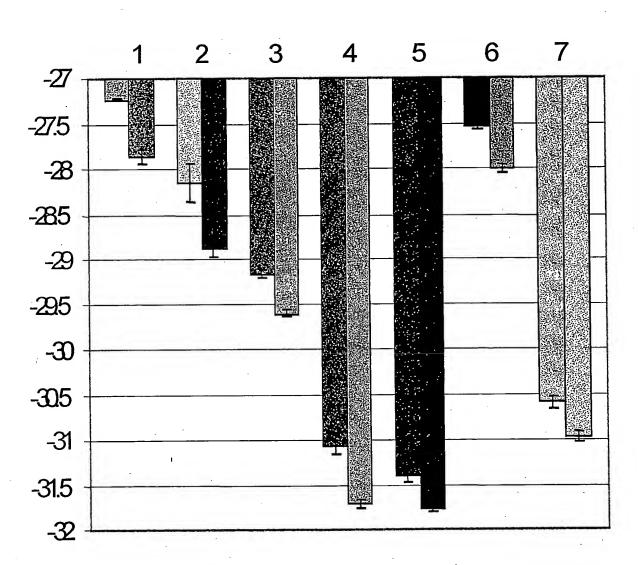


Figure 3

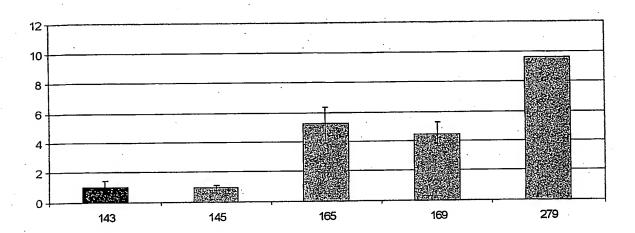


Figure 4a

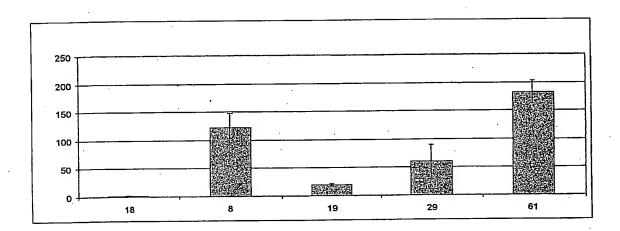


Figure 4b

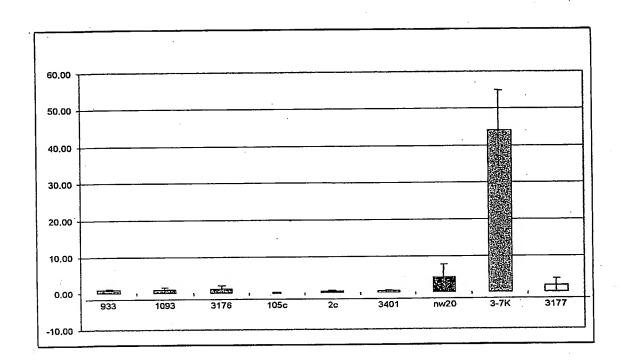


Figure 4c

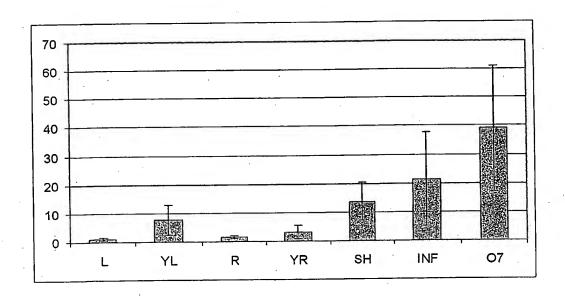


Figure 5a

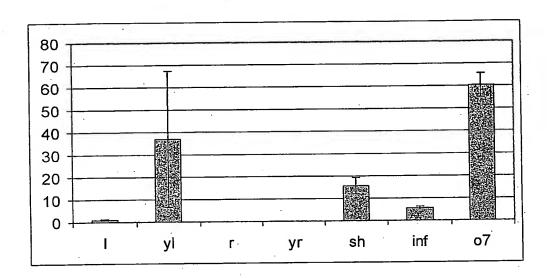


Figure 5b

Figure 6a: Transpiration efficiency at 350 and 500ppm CO₂ (mmolC mol H₂O⁻¹)

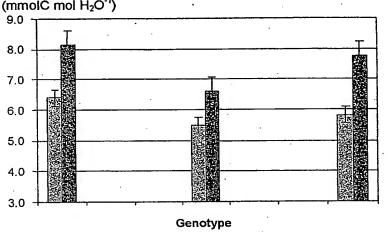


Figure 6b: CO₂ assimilation rate (µmol C m⁻²s⁻¹⁾

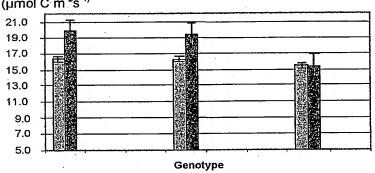
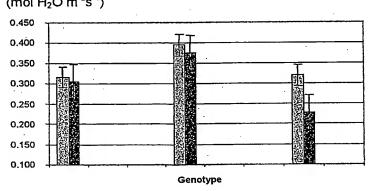


Figure 6c: Stomatal conductance (mol H₂O m⁻²s⁻¹)



T2(+ER) Ld_ER Ld -er1

Ld_ER (line 3177)

Figure 7a: Transpiration efficiency (mmol C mol H₂O⁻¹) at 350 and 500ppm CO₂

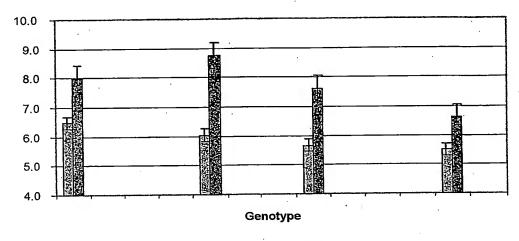


Figure 7b: CO₂ assimilation rate (µmol C m⁻²s⁻¹)

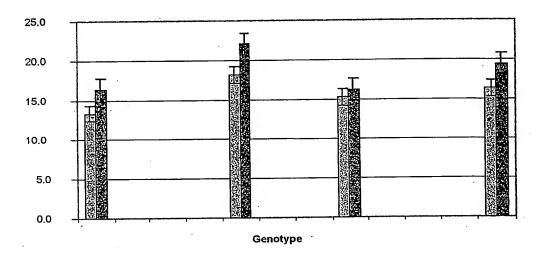
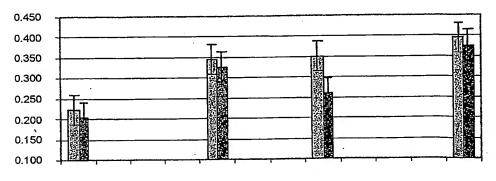


Figure 7c: Stomatal conductance (mol H₂O m⁻² s⁻¹)



F1 (Cold ER* F1 (I derl*

Ld er1

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Figure 8a

Stomatal conductance (mol H₂O m⁻² s⁻¹)

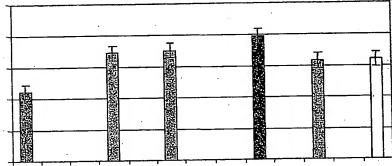


Figure 8b

Epidermal cell area (µm²)

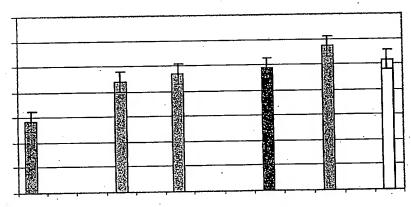


Figure 8c

Number of stomata per mm²

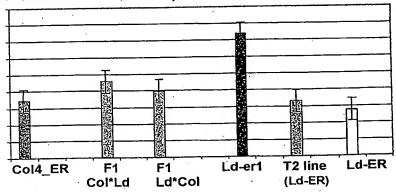


Figure 9a

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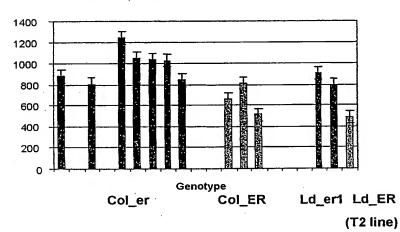
Number of stomata per mm² 600 500 400 300 200 100 Genotype

Col_er

Col_ER Ld_er1 Ld_ER (T2 line)

Figure 9b

Epidermal cell area (µm²)



Carbon isotope composition (per mil) for a range of er mutants and ER ecotypes or transgenic lines

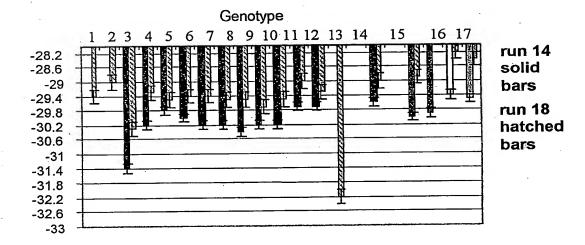


Figure 10

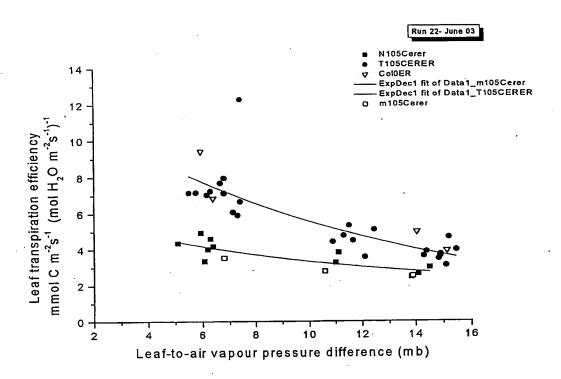


Figure 11

10/519135

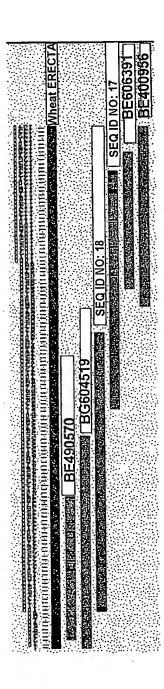
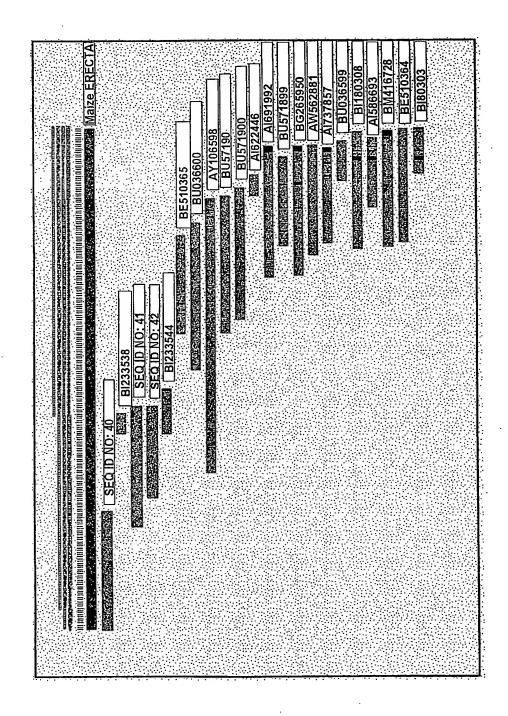


Figure 12



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Erecta_sorghum	
Erecta_maile Erecta Arabidopsis	MALIFRDIVLIGFLFCLSLWATVTSEEGATLLEIKKSFKDVRIVLYDWTTSP
Erecta_rice	HAAARAPALAMAVVVVVGVAVAEAASGGGGGGGGGGGGALHGVKAGFGGAANALVDHDG
Erecta_wheat	
Erecta_sorghum Erecta_maire	-DDYCSWRSVLCDAVTFAVAALALSGLELEGEISPAVG3LKSLVSIDLKENGLSGQIFD3
Erecta_Arabidopsis	S S D Y CVARGY S CENV TY NAVALNIL S DLA LOGICI S PA I GOLA S LL S I DLA GRIL S GOLF DE
Erecta_rice Erecta_wheat	GADH::AMROVTCIMASFAVLAINI.SNIMLGGEISPAIGELKNI.OFVDLKGNILTGQIEDE
Erecta_sorghum	igdcsslrtdfsfnnlogdiffsisklæhlenlilænnoligaifsflsolfnlæildl
Erecta maize	igdcsslondlsynelsgdipysisklkoleolilkonoligyipsylsoiynlkildl
Erecta_Arabidopsis	IGDCISLEYLDLSGNLLYGDIPFSISKLEQLELLILKONQLTGFIPSTLSQIPNLETLDL
Erecta_rice Erecta_wheat	
Erecta_sorghum	AÇNELTGEI PRLIYANEVLOYL
Erecta_maise Erecta Arabidopsis	agnicleget prlitymevloy lglronnlygni spolooltglytedyrnneltgetpet
Erecta_rice Brecta_wheat	A ON OLIT GOIPALI Y WARV LOYI GLARMSLIT GILSPINIO OLIT GLAYPOVR GANLIT GILPES
Erecta_sorghum	ignotsequidlsynretgelefnigelqvatlslqqnretgelesviglhqalavldls
Practo maira	
Erecta_Arabidopsis Erecta_rice	ignctafondlsynglegeiffdigflovatlslognolsgripfviglmoalavldls ignctsfeildisyngisgeifynigflovatlslognalegripfviglmoalavldls
Erocta_wheat	
Erecta_sorghum	Ynqlsgpipsilgnltyteklyiggkligsippelgnistlhylelhdnoltgsippel hgynrligsippelgnistlhylelhdnoltgsippel
Erecta_mai=+ Erecta_Arabidop=i=	GNLLSGSIPPILGNLTFTEKLYLHSNKLTGSIPPELGNMSKLHYLELNINHLTGHIPPEL
Brecta_rice Brecta_wheat	ene lugpipsi lgnlsy tgklylhgnkl/tgvippblgnhsklsylqlndnelugpipabl
Erecta_sorghum	Grltglfdimlannhlegpipinlsscvninsfnaygnklingtiprslrkleshtylkilb
Erecta_maize	Grltglfdlmlannhlegpippinlsscynlnsfnaygnklngtiprslaklesmtylnls Gkltdlfdlwanndlegpipphlssctnlnslavhgnkpsgtiprafoklesmtylnls
Erecta_Arabidopsis Erecta_rice	GKLEELFEINLANNILOGPIPANISSCTALNKYNVYGNKLNGSIPAGFOKLESLTY LNLS
Erecta_wheat	PNYGRINGSIPAGFORIESLYNINIAS; *:::*::::::::::::::::::::::::::::::::
Erecta_sorghum	snf isgsipiblsrinnlotldlschndtgpipssigslehllrlnlsknglvgfipæf snf isgsipielsrinnlotldlschndtgpipssignlehllrlnlskndlvgfipæf
Erecta_Maise Erecta_Arabidopsis	Sinikgpipvelsrignldtldlsnikingiipsslgdlehllininlsrikitgvvpgdf
Rrecta rice	sinfk@nipselghi inldtldlsynepsgpvpatigdlehllelnlsknhlogpvpaep sinfk@hipselghi inldtldlsynelsgpvpatigdlehllqlnlsknhlbgsvpaep
Erecta_wheat	** !* ** ** ** ****** * 1** 1** 1******* 1**** 1 * 1**;*
Erecta_sorghum	Gnlrsymeidlsynhlgglipgelenlonimll———————————————————————————————————
Erecta_maize Erecta_Arabidopsis	GNLRSTREEDLSTRIDISGPIPEELNOLONIILLRLENNNLTGRV-GSLANCLSLTVL
Erecta_rice Erecta_wheat	GNLRSVOVIDMSINNLSGSLFEELGOLONLDSLILMINNLVGEIPAQLANCFSLNNLAFQ
Erecta_wheat	Gnlrsiqvidlengumesgylpeelgolonidslilmoni lwgbipaqlancfblnIl
Erecta_sorghum	NVS YNNLAGUV PALNINF TRESPDSFLGNPGLCGYWLGSSCRSTG
Erecta_maize Erecta_Arabidopsis	nvsynnlagav Ptdnnf tresidse lgnpglogywlgascrstg nvsynnlugdi Pkynnf sres PD
Erecta_rice Erecta_wheat	efvioofintofdgkelleifngkhllisdcnotinhcsflgrpllhvycodsscghs- nlshnrisghvffaknfskypge
Brecta_meat	1. 111. * 111.1.
Erecta_sorghum Erecta_maize	hherppiskaaiigvavgglvilihilvavcrphrppafkdvtvskpvrnappklvilhh hrdkppiskaaiigvavgglvilimilvavcrphhppafkdatvskpvengppklvilhm
Erecta_Arabidopsis	rtvrvsisraailgiaiggivillmvliaacrphyppfilogsidkpvtystpklvilm Hgorvnisktaiaciilgfiillcvlllaiyktnopoplvkgs-dkpvo—gppklvvlom
Erecta_rice Erecta_wheat	HGSKVNT-RTAIACIISGEVILLCVLLLAIYRTRROPPIKAS-DKROQ-GFPKIVLLQXI
Erecta_sorghum	nmalhvyddimrmtenlseky i i gygasstvyk cvlknck pvaikklyahy poslkefet
Erecta_maize Erecta_Arabidopsis	nmalhvfddimmtenlseky iigygasstvykovlknokpvaikklyahy loslketet nmalhvyedimmtenlseky iighgasstvykovlknokpvaikrlyshnposhkofet
Erecta_rice	DMATHTYEDTMRI.TENLSEKYTTGYGASSTVYKCELKSGKATAVKRLYSOYNNSLREFET
Erecta_wheat	DMAIHTYDDIHALTENLSEKYIIGYGASSTVYKCVLKSGKAIAVKRK—QYNHGARFFF
Erecta_sorghum	e le tvgsikhrilvslogy slspvgnilf ydynecgsludv lhegsskkkklowetrlai E le tvgsikhrilvslogy slspvgnilf yaynesgsludv lhegsskkyklow trlri
Erecta_maize Erecta_Arabidopsis	e lemls31khrnlvsloayslshigslifydyleng31wdlih-gptkkktilwdtrlki
Erecta_rice Erecta_wheat	eletigsindrnlvsligfslsphchllpydymengslwollh-gpskvklnwotrlri eletvgsiphrnlvsligfslsphgnllpydymengslwollh-gpskvkldwotrlri
Erecta_wheat	*** 1'**!********* *'**** *!* ****!** *'!** '%!* ***!*
Erecta_sorghum Erecta_maize	Algaacgiaylhhocspri ihrdvkskni llokdybahltdfgiakslovskyhtstyvh Algaacgiaylhhocspri ihrdvkskni llokdybahltdfgiakslovskyhtstyvh
Erecta_Arabidopsis	aygaaoglayi.hhdcspriihrdvkssniildkdlearltdfgiaksi.cvskshtstyvk
Erecta_rice Erecta_wheat	AVGAAĞILAYLIHDCNPRI IHRDVKSSNI LLDENFEAHLSDFGIAKCVPSANSHASTYVI. AVGAAÇGIAYLIHDCNPRIYIRDVNSSNI LLDEHFEAHLSDFGIAKCVPSAKHASTYVI.
Erecta_sorghum	GTIGYIDFEYARTSRINEKSDVYRLANCSAGAADWOEASGORILSKTASNEVMI
Erecta maize	gtigyidfeyartsrineksdvysygivliellitgkkpvinechlihlilsktasnevm
Erecta_Arabidopsis Erecta_rice	GTIGY IDPEYARTSRLTEKSDVY SYGIVLLELLTRKAVDDESNLHHLINSKTGNNEVH GTIGY IDPEYARTSRLNEKSDVY SFGIVLLELLTGKKAVLMESNLHQLI LSKADDNTVH
Erecta_vheat	GTIGY IDPETART SQLAEKSDYTS
Erecta_sorghum	TVDPDIGDTCKDLGEVKKLFQLALLCTKRQPSDRPTMEEVVRVLDCLVNPDPPPRP
Erecta maize	TVDPDVGDTCKDLGEVKKLFQLALLCTKRQPSDRPTHFEVVRVLDCLVNPEPPPQPQQQX MADPDITSTCKDLGVVKKVFQLALLCTKRQPNDRPTHFQVTRVLGSPHLSEQPPAAT
Erecta_Arabidopsis Erecta_rice	Avdsevsvictinglyrkapqlallctknipsdrptheevarvllsllpasamttp
F	

Figure 13

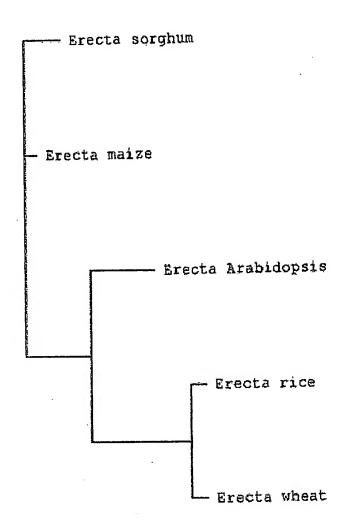


FIGURE 14

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